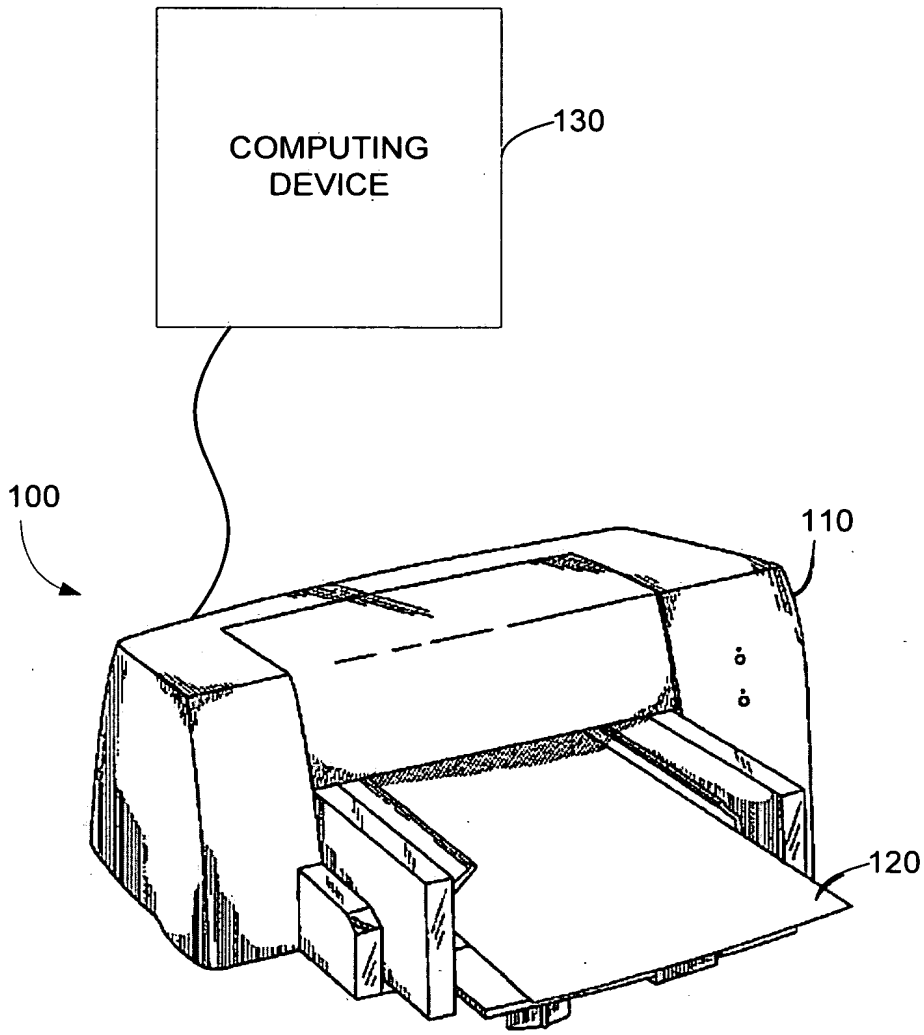


FIG. 1

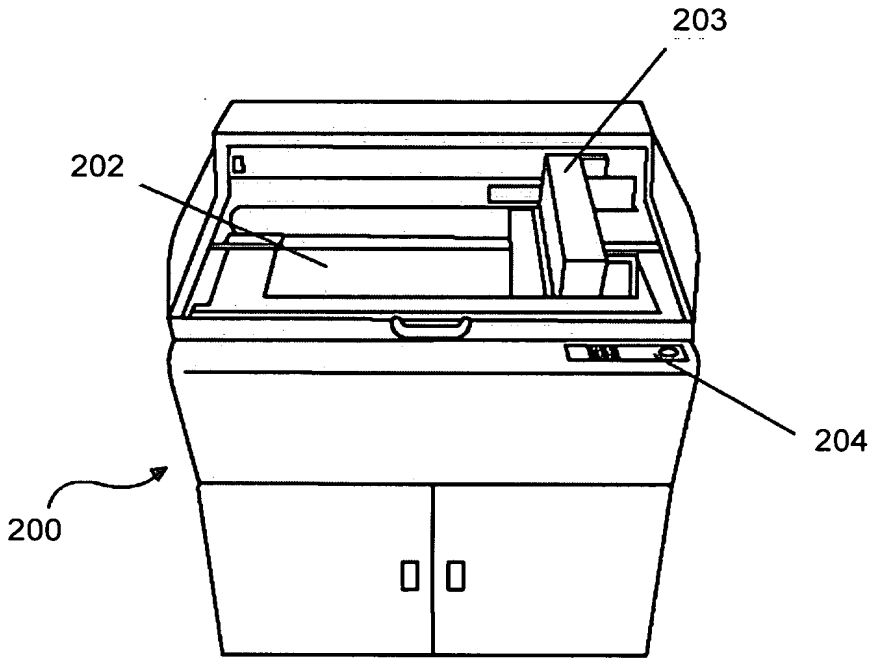


FIG. 2

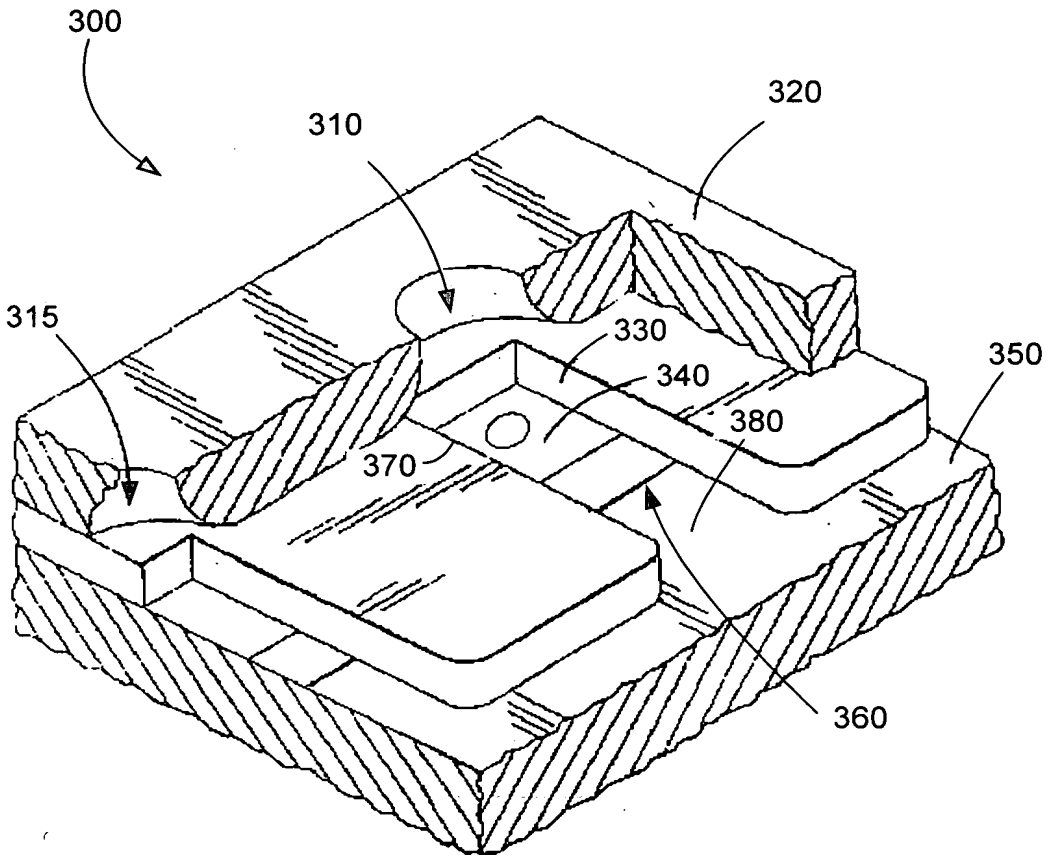


FIG. 3A

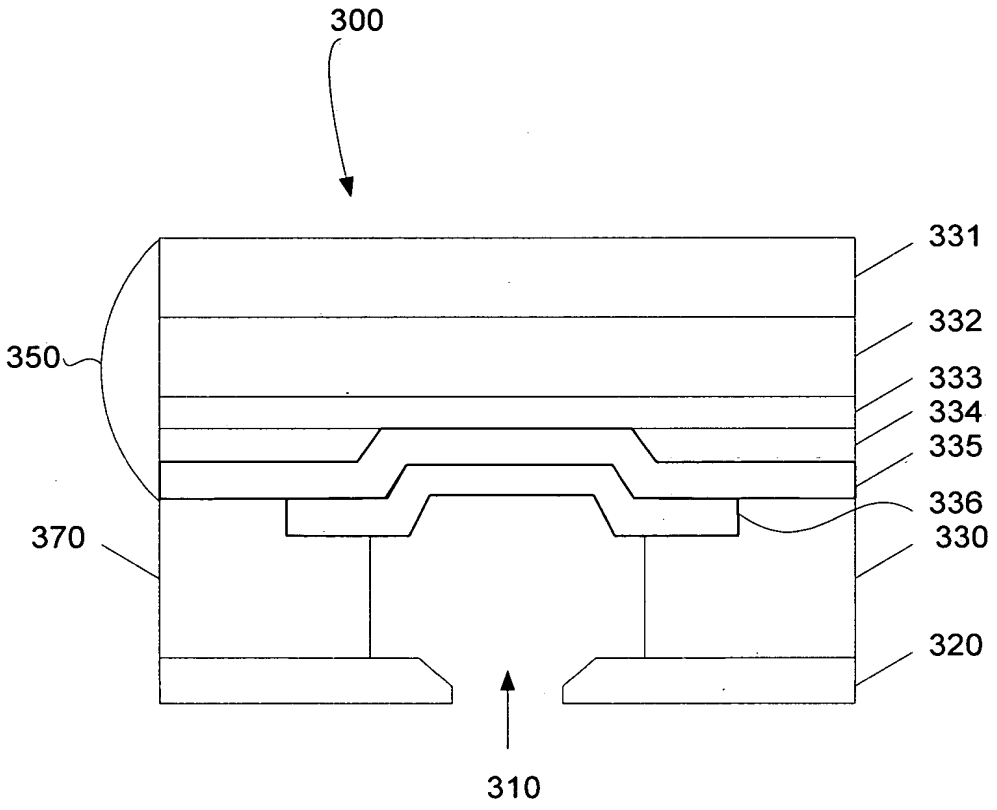


FIG. 3B

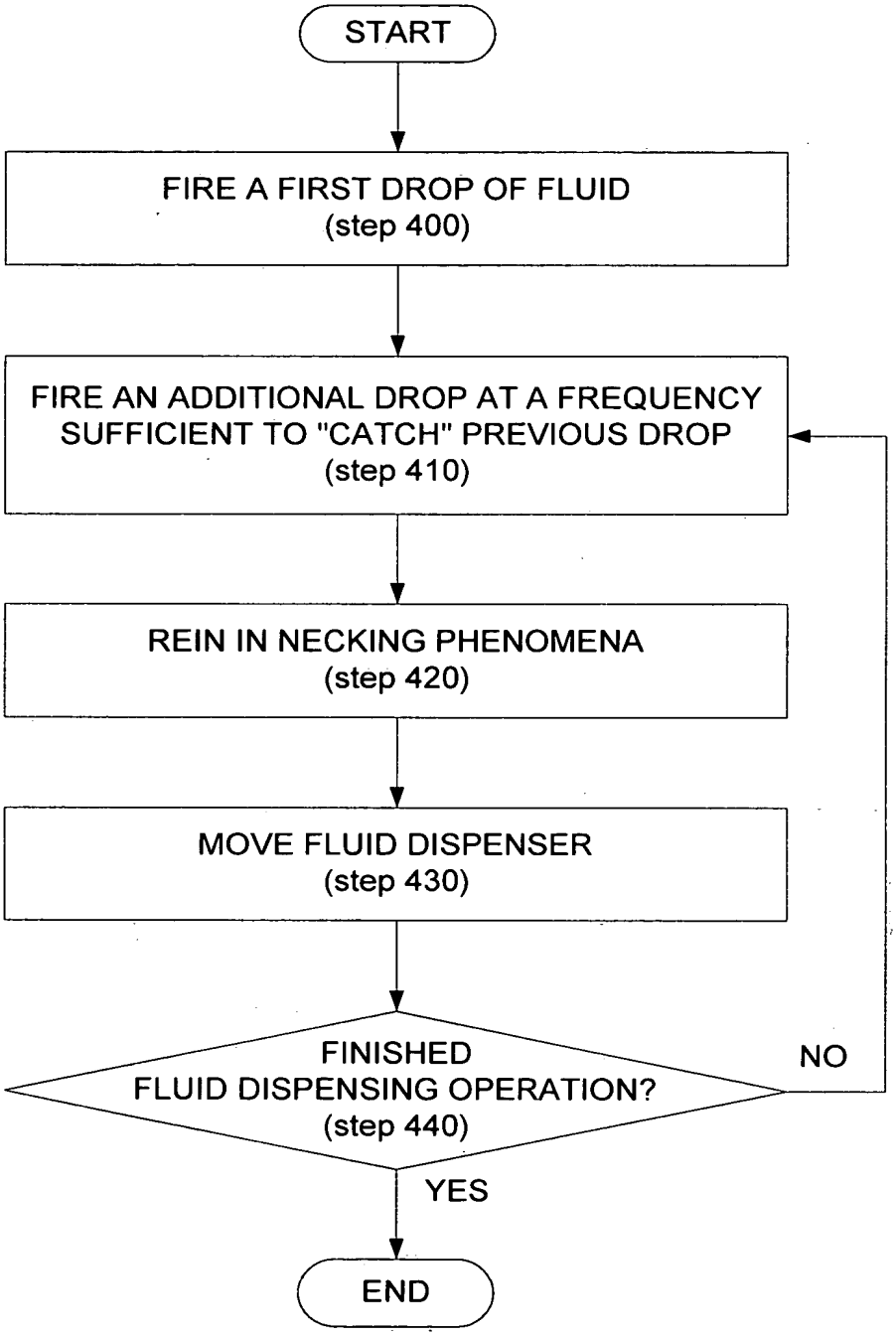

START
FIRE A FIRST DROP OF FLUID
(step 400)
FIRE AN ADDITIONAL DROP AT A FREQUENCY
SUFFICIENT TO "CATCH" PREVIOUS DROP
(step 410)
REIN IN NECKING PHENOMENA
(step 420)
MOVE FLUID DISPENSER
(step 430)
FINISHED
FLUID DISPENSING OPERATION?
(step 440)
NO
YES
END

FIG. 4

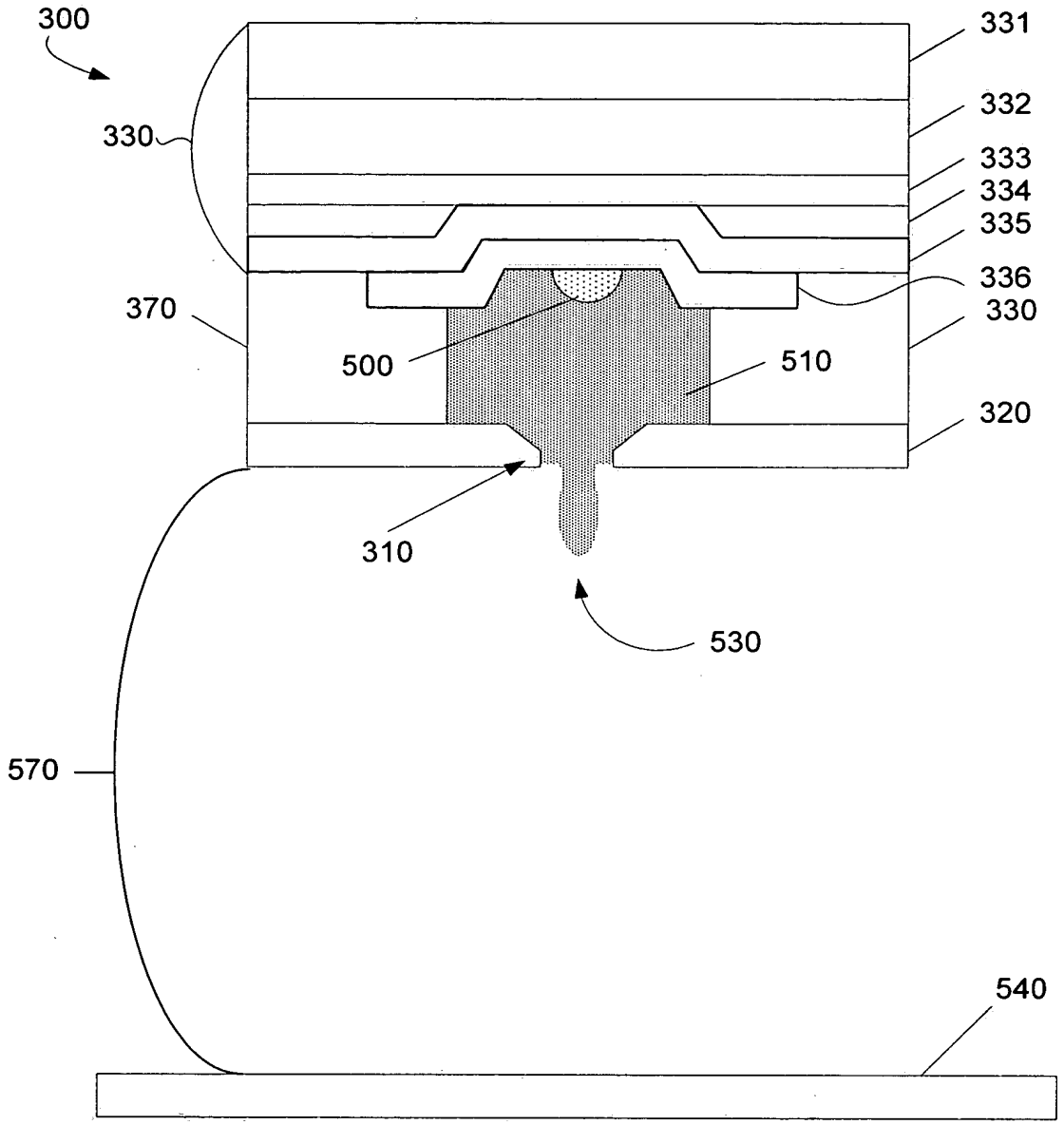

300
331
332
330
333
334
335
336
370
330
500
510
320
310
530
570
540

FIG. 5A

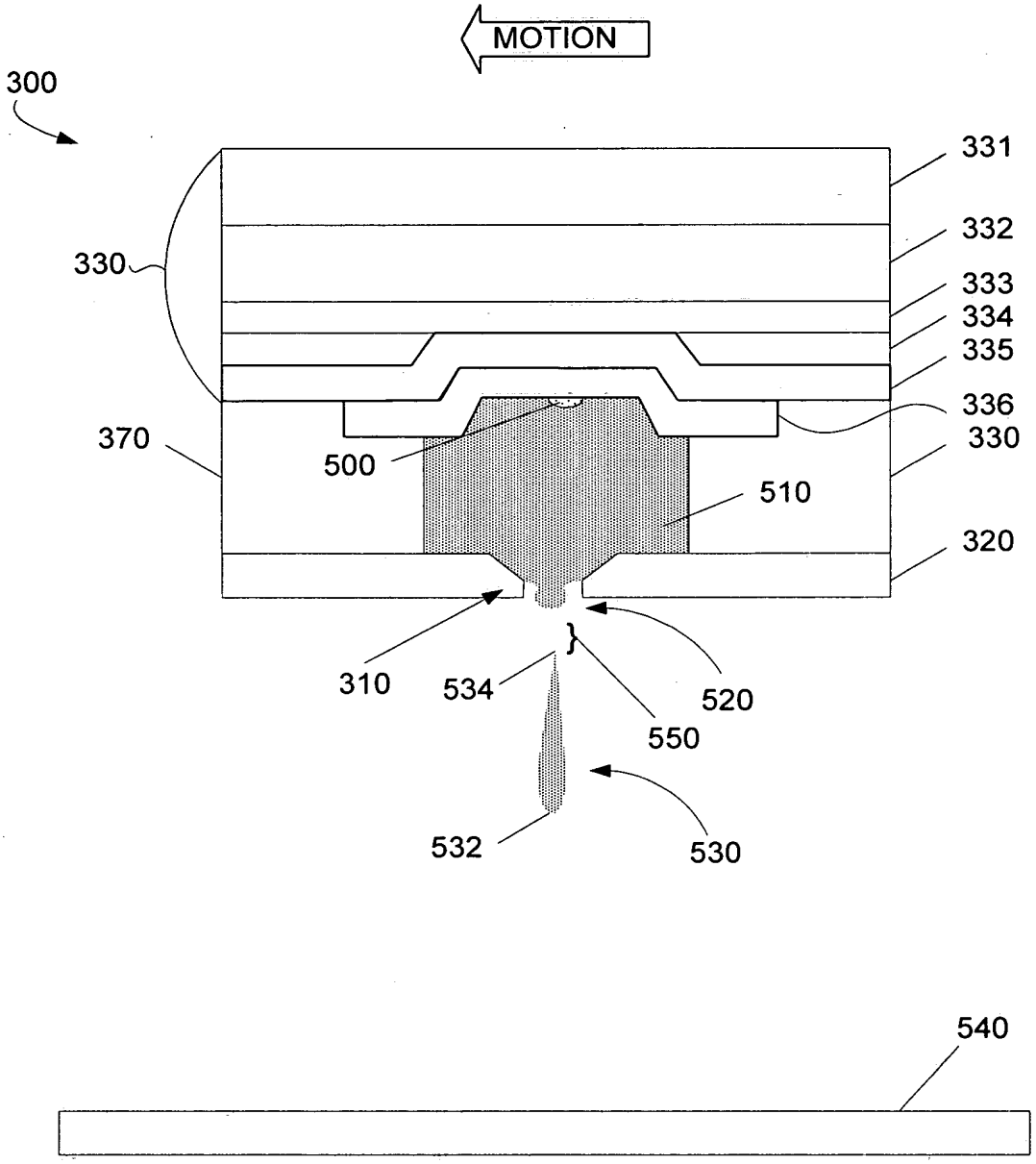

MOTION
300
331
332
330
333
334
335
336
370
330
500
510
320
310
534
520
550
532
530
540

FIG. 5B

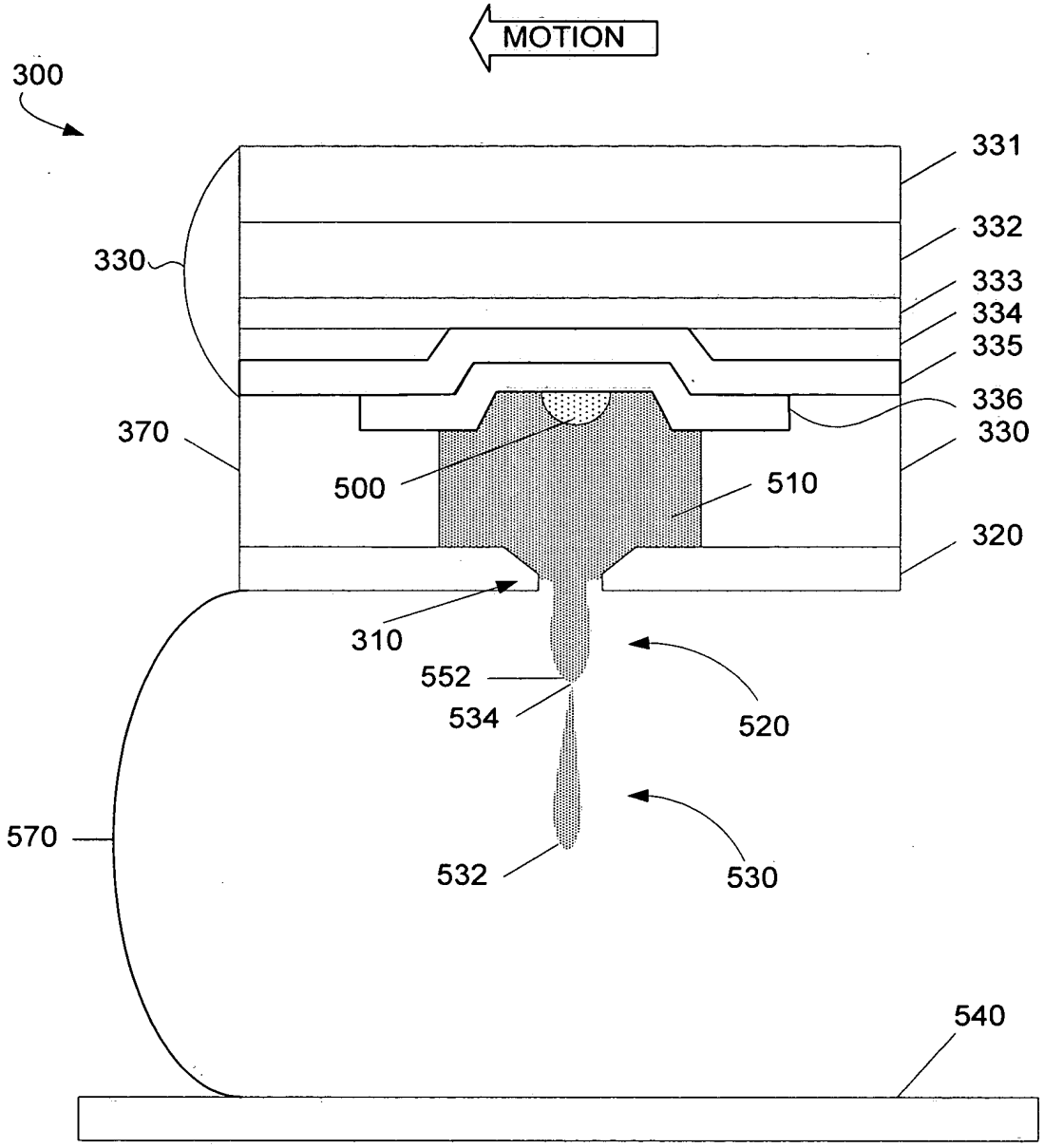

MOTION
300
331
332
330
333
334
335
336
370
330
500
510
320
310
552
534
520
570
532
530
540

FIG. 5C

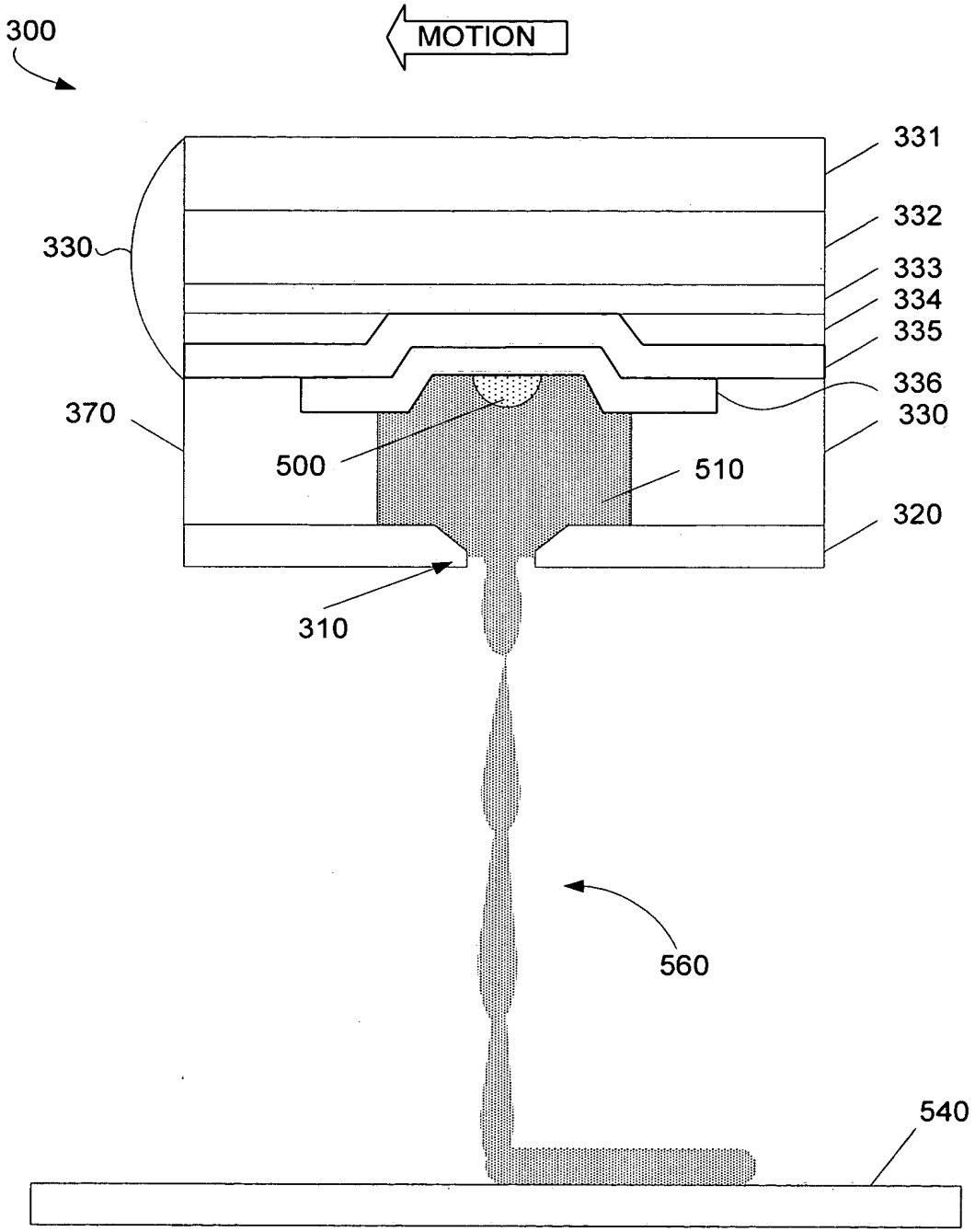

300
MOTION
331
332
330
333
334
335
336
370
330
500
510
320
310
560
540

FIG. 5D

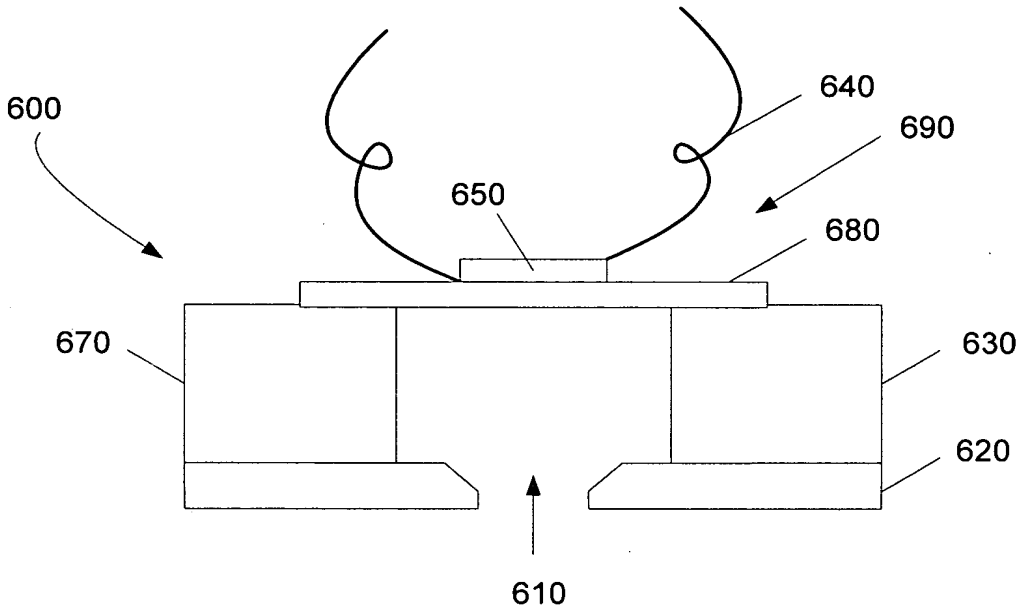


FIG. 6

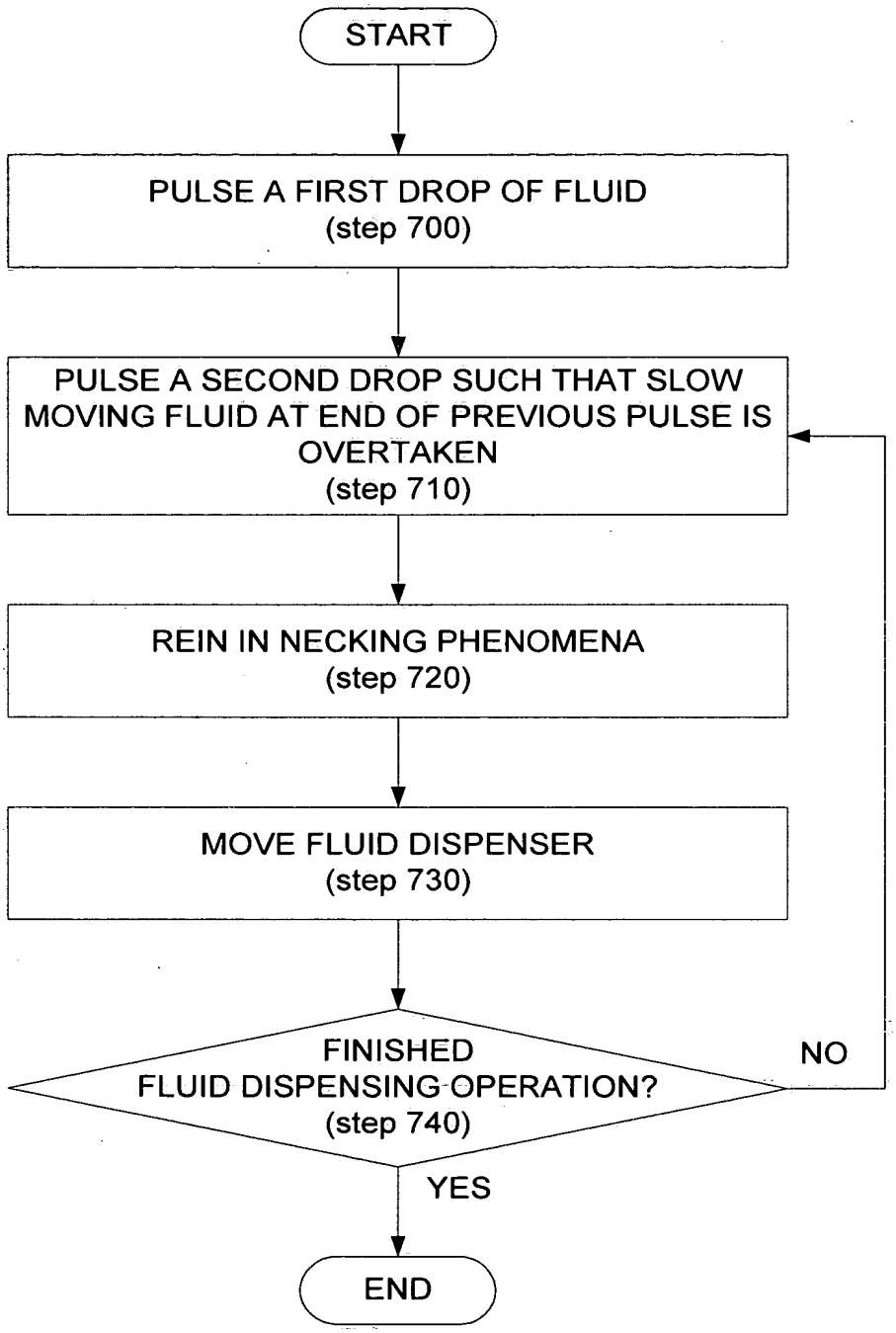

START
PULSE A FIRST DROP OF FLUID
(step 700)
PULSE A SECOND DROP SUCH THAT SLOW MOVING FLUID AT END OF PREVIOUS PULSE IS OVERTAKEN
(step 710)
REIN IN NECKING PHENOMENA
(step 720)
MOVE FLUID DISPENSER
(step 730)
FINISHED FLUID DISPENSING OPERATION?
(step 740)
NO
YES
END

FIG. 7

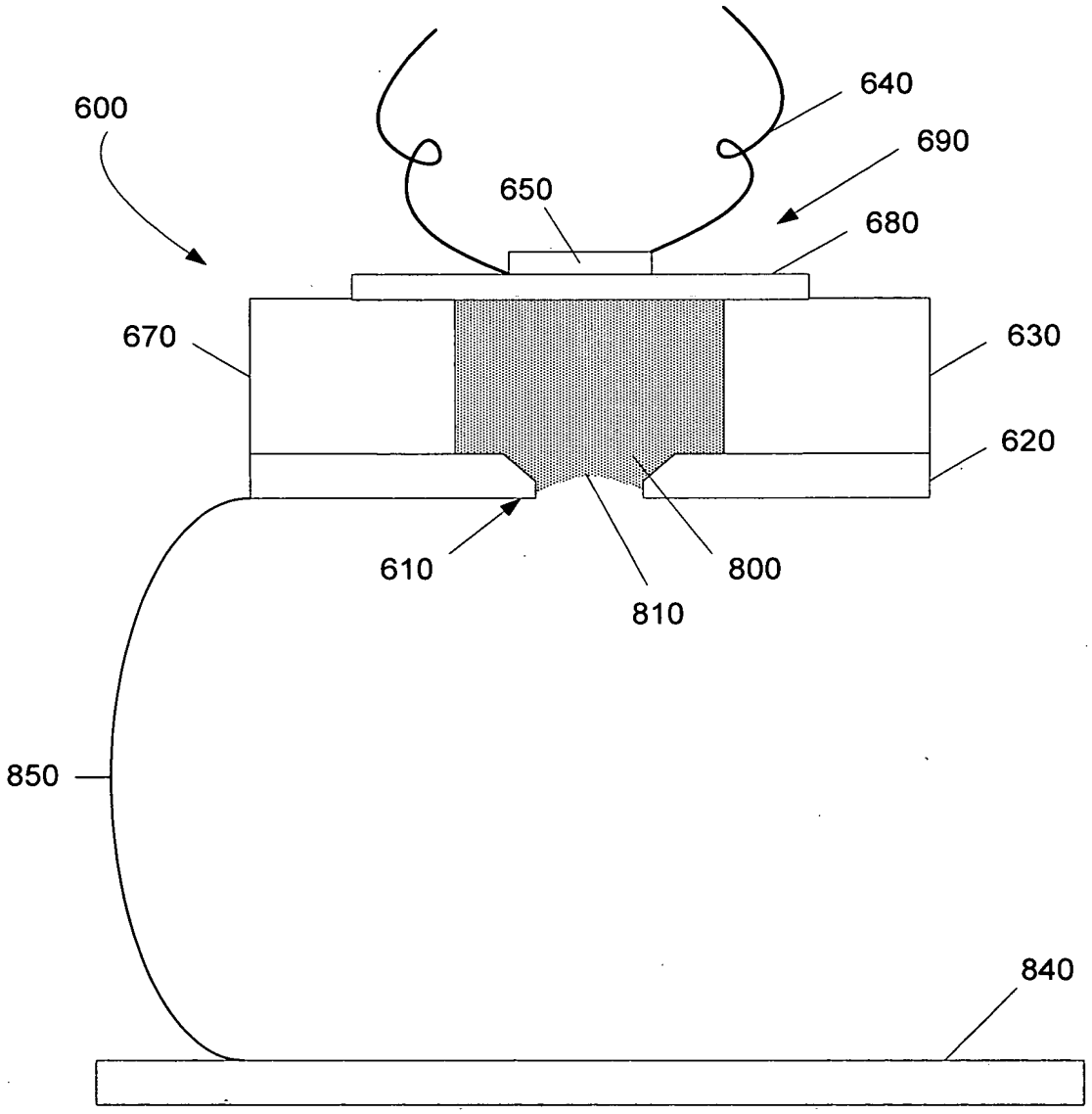
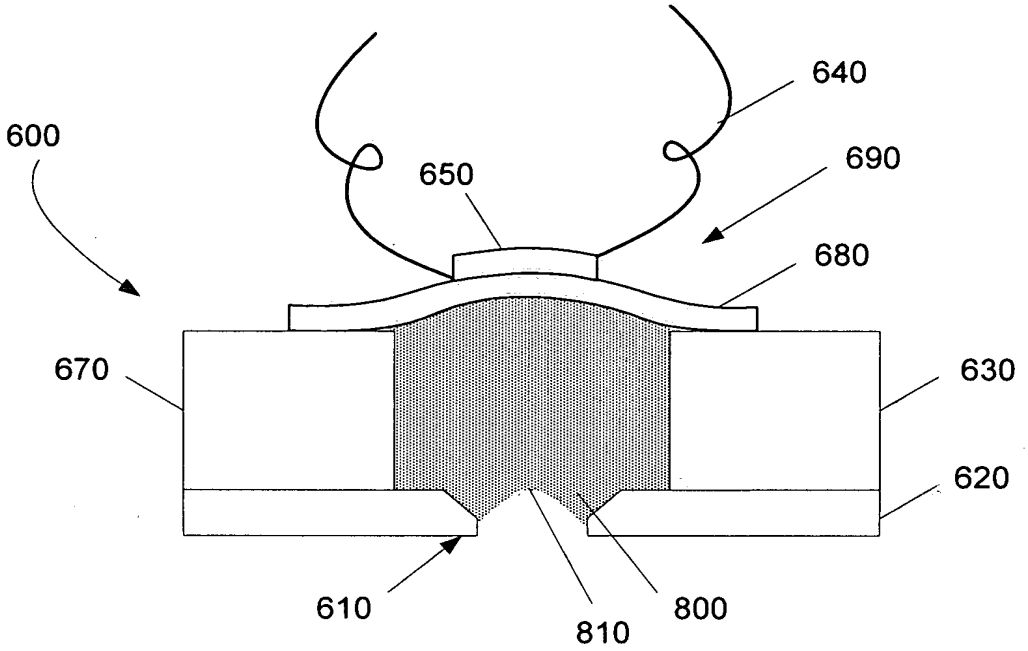


FIG. 8A



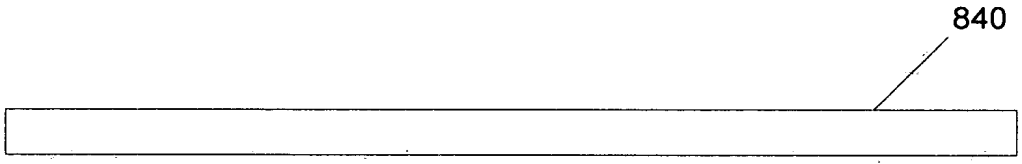


FIG. 8B

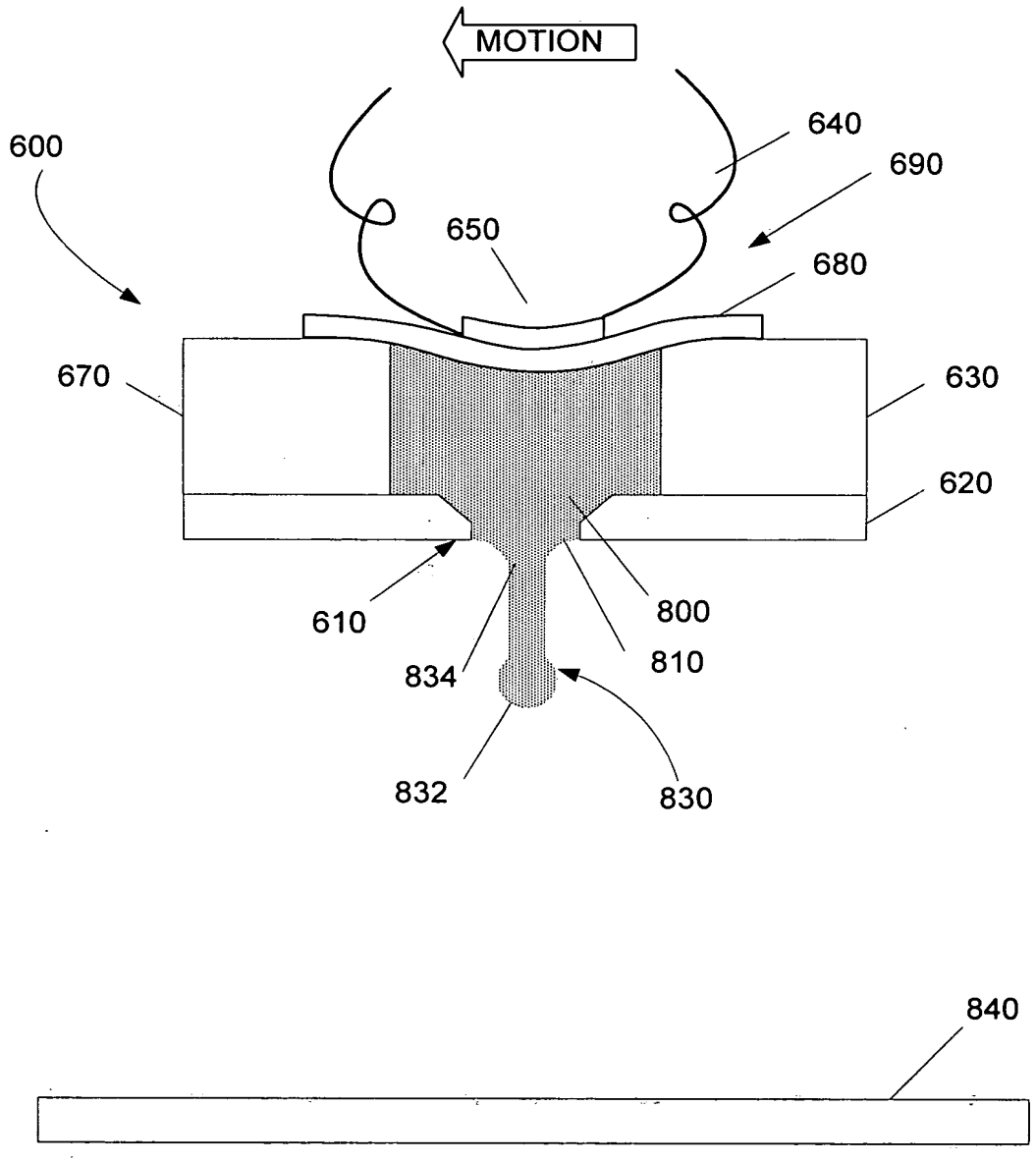
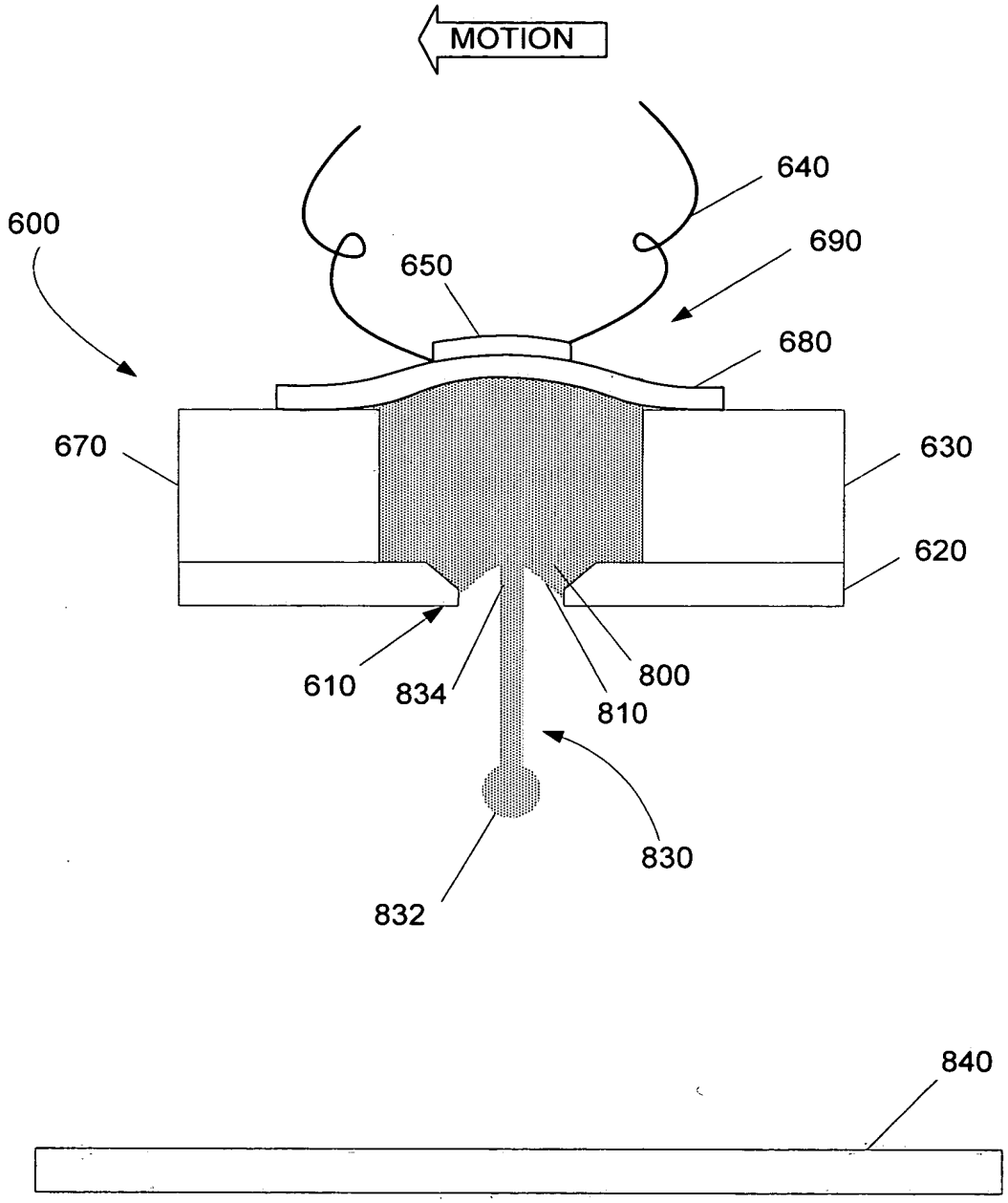

MOTION
600
640
690
650
680
670
630
620
610
800
810
834
832
830
840

FIG. 8C


MOTION
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600
690
650
680
670
630
620
610
834
800
810
830
832
840

FIG. 8D

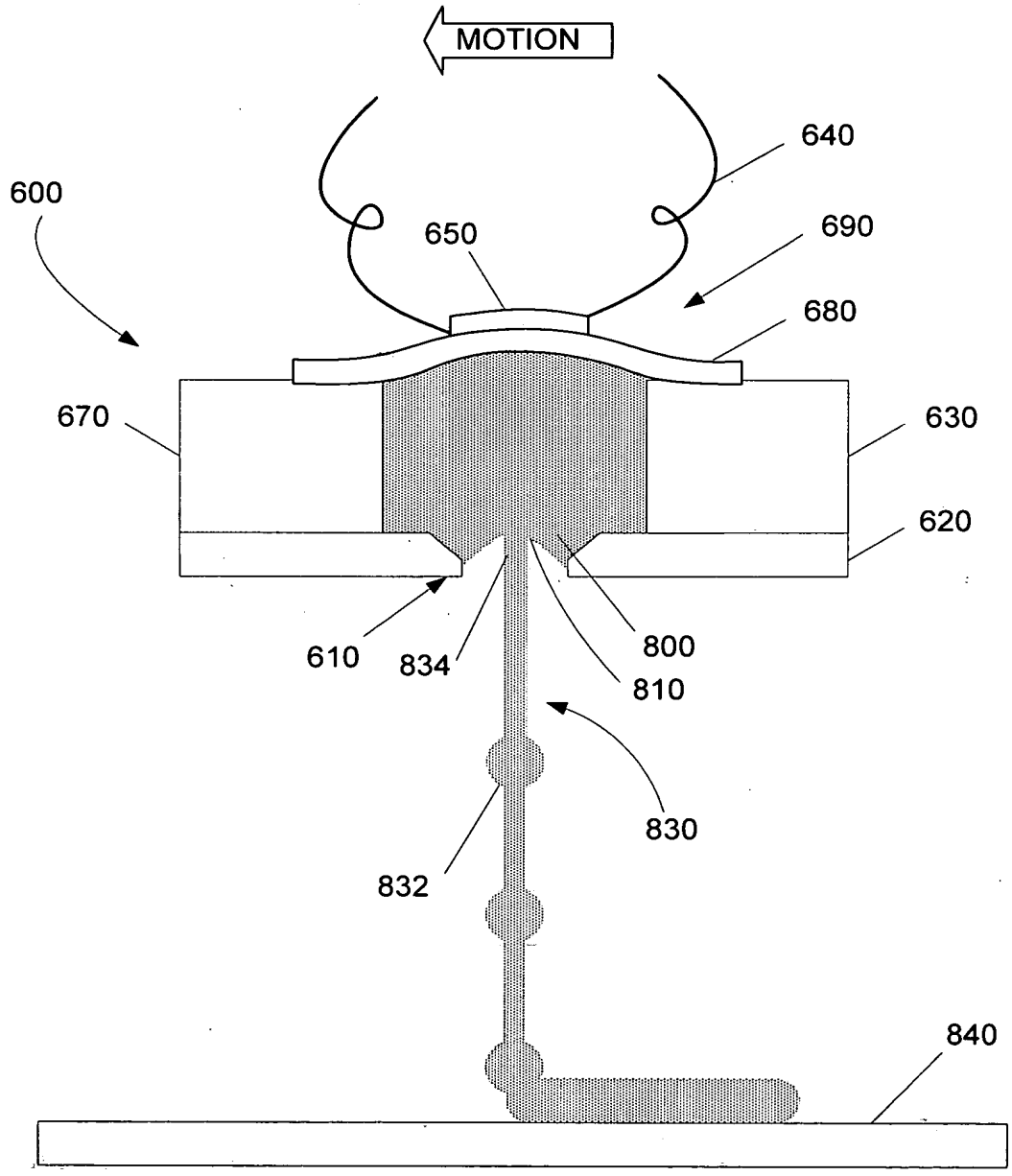
MOTION
640
600
650
690
680
670
630
620
610
834
800
810
830
832
840

FIG. 8E